



# EPA Fact Sheet:

## Asbestos Sampling in Libby, MT

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EPA Information Center u 501 Mineral Avenue, Libby, MT 59923 u (406)293-6194

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### Background

Vermiculite was discovered in Libby, Montana in 1881 by gold miners and then in 1919 Edward Alley discovered its unique properties. In the 1920s the Zonolite Company formed and began mining vermiculite. In 1963, W.R. Grace bought the Zonolite mining operations. The Mine closed in 1990. While in operation, the vermiculite mine in Libby may have produced 80% of the world's supply of vermiculite. Vermiculite has been used in building insulation and as a soil conditioner. Unfortunately, the vermiculite from the Libby mine was contaminated with a particularly toxic form of naturally-occurring asbestos called tremolite-actinolite.

### Concerns

Area residents as well as local, state and federal officials are concerned about the recently reported numbers of people who have died from or have been diagnosed with asbestos-related disease.

Asbestosis is a restrictive lung disease which can be fatal. In addition, exposure to asbestos can cause lung cancers, including a cancer of the lung lining called mesothelioma. While lung cancer has a number of associated causes, asbestosis is uniquely associated with exposure to asbestos. The combination of smoking and exposure to asbestos greatly increases the risk of developing one of these lung cancers. We are most concerned about people being exposed to airborne asbestos and breathing in the tiny fibers.

The fibers that are most dangerous to human health are those fibers that are longer than 5 microns\* and especially those longer than 10 microns, with a length to width ratio of 5:1. This size of fiber is relatively long and skinny. The tremolite-actinolite fibers may also be more chemically reactive, making them even more toxic to people's lungs.

\* (One inch contains approximately 25,000 microns. We cannot see individual fibers of the 5 or 10 micron size. To be able see or count fibers this tiny, we use a powerful microscope such as a Transmission Electron Microscope.)



Although people can also be exposed to asbestos by ingestion (eating, drinking) or possibly on the skin, these are not major exposure routes and do not pose nearly as great a risk as inhalation.

### Immediate Actions

In response to local concerns and news articles, an EPA Emergency Response Team, in coordination with the Montana Department of Environmental Quality (MDEQ) and the Montana Department of Health and Human Services (MDHHS), began sampling in December 1999.

The team collected air, soil (yard, garden, driveway), dust and vermiculite insulation samples. These samples were taken at 32 residences as well as several potential hot spots due to previous vermiculite activities in Libby. These hot spots include the former expansion plant area, the former railroad loading facility, the mine, and Rainey Creek Road.

The team also installed ambient air monitors at four locations in Libby. These monitors will detect asbestos fibers in the outdoor air. We began reading the measurements in January, will read them again in March and then monthly from May through October 2000.

### Results

The results from the December indoor air sampling were released the week of January 31, 2000. The results from two of the former vermiculite processing areas showed asbestos fibers present in the range of concern. That means, we detected fibers greater than 5 microns.

In addition, two of the 32 homes we sampled also showed asbestos fibers 5 microns or longer.

The two former vermiculite processing areas and one home showed tremolite-actinolite asbestos fibers — the kind of asbestos found at the Libby vermiculite mine. At the other home, we found chrysotile asbestos, another type of asbestos fiber. Chrysotile asbestos for years was used commercially in insulation, as well as ceiling and floor tiles.

At these four sites, we will take immediate action to reduce or eliminate the source of exposure. By doing so, we reduce or eliminate any current risks to human health.

At the other 30 homes, we did not detect asbestos fibers greater than 5 microns in the indoor air samples. However, to be sure as possible about the safety of these homes, EPA will be taking a closer

look (lower detection limit) at these samples. We will do this using the samples already collected. We want to find out — with as much certainty as possible — whether there is or is not any health risk to these families from asbestos.

### Next steps

The team is currently analyzing the other samples from the homes, businesses and source areas (soil from yards, gardens, driveways, dust, and insulation) at EPA-approved laboratories. We hope to have these results back in March.

In the meantime, the team will begin sampling more homes later in February.

We will continue to analyze the outdoor air around Libby and by the Mine.

We will continue to work with the community and get the results out as quickly as possible.

### Community Involvement

A Community Advisory Group (CAG) is forming. This group will contain representatives from many of the diverse interests in the Libby

community. The CAG will provide a forum for community residents to review documents, hear and make presentations, express concerns, and make recommendations. EPA, the Agency for Toxic Substances and Disease Registry (ATSDR), and MDEQ will provide technical and administrative support to the CAG.

We are also developing a Community Involvement Plan (CIP) to help guide our interactions with the Libby community. The CIP will be based largely on discussions with community members and officials.

#### For more information

Community members are encouraged to stop by the EPA Information Center in downtown Libby (501 Mineral Avenue) or contact any of the team members listed below. The Information Center is open weekdays and is a good place to get more information, ask questions or express concerns. The phone number is (406) 293-6194.

Stop by anytime!

#### EPA

Paul Peronard, On-Scene Coordinator

1-800-227-8917 x6808  
Johanna Miller, OSC  
1-800-227-8917 x6804  
Chris Weis, Toxicologist  
1-800-227-8917 x6671  
Wendy Thomi, Community Involvement  
(406) 441-1150 x241  
Diana Hammer, Community Involvement  
1-800-227-8917 x6601  
Aubrey Miller, Public Health Service  
(303) 844-7857

Montana DEQ

John Constan, Project Manager  
(406) 444-1438  
Tom Ellerhoff, Administrative Officer  
(406) 444-5263  
Dan Rapkoch, Communications  
(406) 444-2929

Montana Department of Public Health  
and Human Services

Todd Damrow, Epidemiologist  
(406) 444-3986  
Mike Spence, Medical Officer  
(406) 444-1286

ATSDR

Chris Poulet, Health Scientist  
(303) 312-7013

Lincoln Co. Environmental Health Dept.

Ron Anderson, Director  
(406) 293-7781 x228  
Brad Black, County Medical Officer  
(406) 293-7781 x228

Some Questions You Might Have:

Q: I have zonolite insulation in my house and I'm thinking about doing some remodeling. What do you recommend?

A: We recommend — to the extent possible — that you hold off on any remodeling until we know more about the asbestos content of the zonolite insulation and any potential health effects.

Q: Will you offer health testing for the community?

A: Yes. EPA is working with local, state and other federal agencies to set up a voluntary "biological exposure assessment" (radiological screening) and other associated tests for the Libby community this Spring.

